

17-4 H900 1.345
Work Order ID 78907

78907

January-17-12 8:57:46 AM

Page 1

Item ID: D3689-1 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: SLEEVE
 Start Date: 17/01/2012 Start Qty: 4.00 ***4*** Cust Item ID:
 Required Date: 31/01/2012 Req'd Qty: 4.00 ***4*** Customer:
 Reference:

Approvals: Process Plan: H.L.J Date: 12/01/17 Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D3689	Rev B

100	DOOSAN LATHE	0.00							
-----	--------------	------	--	--	--	--	--	--	--

100
 Doosan
 Doosan Lathe
 Memo
 1- Turn as per Folio FA722 Rev: _____ & Dwg D3689 Rev: _____
 2-CHECK THREAD WITH GO-NO GO GAUGE DT9450 A & B
 3-Deburr per dwg D3689
 12/3/13

110	QC2- Inspect parts off machine FAI/FAIB	0.00							
-----	---	------	--	--	--	--	--	--	--

110
 QC
 Quality Control
 Memo
 12/3/13

120	CONVENTIONAL MILLING MACHINE	0.00							
-----	------------------------------	------	--	--	--	--	--	--	--

120
 Mill Conv
 Conventional Milling Machine
 Memo
 C'sink .188" holes as per dwg D3689
 12/3/13

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 78907

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Page 2

January-17-12 8:57:46 AM

Item ID: D3689-1

Accept

N900040100

Setup Start *NS1*

Revision ID:

Item Name: SLEEVE

Stop *NS2*

Start Date: 17/01/2012 Start Qty: 4.00 *4*

Cust Item ID:

Required Date: 31/01/2012 Req'd Qty: 4.00 *4*

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	QC2- Inspect parts off machine FAI/FAIB	0.00							
130									
QC	Memo	0.00							
Quality Control									
140	QC8- Inspect parts - second check	0.00							
140									
QC	Memo	0.00							
Quality Control	100% CHECK,CHECK ALL DIMENSIONS AND THREAD FIT								
150	PURCHASING	0.00							
150									
Purchasing	Memo	0.00							
Purchasing	Issue P/O: <u>16456</u>								
	LPI Per ASTM 1417 LEVEL 2								
	Certificate of conformaty is required								

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Work Order ID 78907

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Page 3

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 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	Receive & Inspect for Damage & Mat'l Certs	0.00							
160									
Packaging	Memo	0.00							
Packaging	Ensure certificate of conformity is attached								
170	QC5- Inspect part completeness to step on W/O	0.00							
170									
QC	Memo	0.00							
Quality Control									
180	Identify as per dwg & Stock Location: STGA	0.00							
180									
Packaging	Memo	0.00							
Packaging									

6/23/12 *(U)*

6/16/12

(X) (X)

(X) Sp 12-06-16

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

January-17-12 8:57:50 AM

Page 1

Work Order ID: 78907

78907

Parent Item: D3689-1

D3689-1

Parent Item Name: SLEEVE

Start Date: 17/01/2012

Required Date: 31/01/2012

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP Rev:A New Issue 08-02-11 JLM Verified By:EC
IPP Rev:B Material Change 09-01-07 JLM Verified By:EC
IPP Rev:C Add note on material cutting JLM Verified By:JM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M174PH-H900R1.375		Purchased	No			100	f	19.7507	0.5	2.105263			
M174PH-H900R1 375													
17-4 SS H900 ROUND BAR 1.375													
						<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>			
						MAT030		19.7507					
						111123		19.7507					

**

SA 12/3/19

2 Reet

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr.	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	78907
Description: Sleeve		Part Number:	D3689-1
Inspection Dwg: D3689 Rev: B		Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
1.90	+/-0.030	1.90	/		SA-9	OK
Ø0.768	+/-0.010	Ø0.768	/			
Ø0.063	+0.005/-0.001	Ø0.063	/			
R0.06	+/-0.030	R0.06	/		R.G.	
3/4-16UNF-2B	N/A		/			
0.035 x 45°	+/-0.010 x 0.5°	0.035 x 45°	/			
1.5	+/-0.030	1.5	/			
1.35	+/-0.030	1.35	/			
Ø0.188	+0.005/-0.001	Ø0.188	/			
90°	0.5°	90°	/			
Ø0.250	+/-0.010	Ø0.250	/			
Ø1.075	+0.000/-0.015	Ø1.067	/			
1.13	+/-0.030	1.130	/			
4.00	+/-0.030	4.006	/			

Measured by:	SW	Audited by:	DR	Prototype Approval:	N/A
Date:	12/3/12	Date:	12.3.13	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	09.05.11	New Issue	KJ	AG

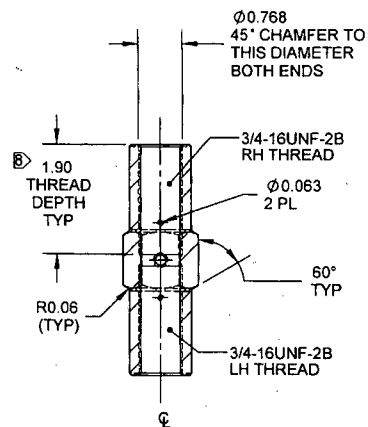
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

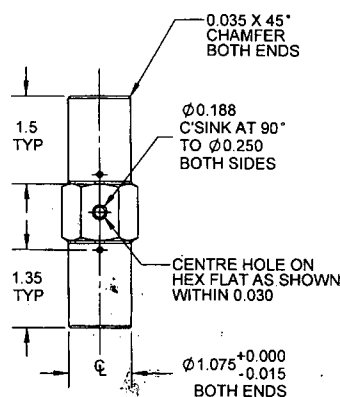
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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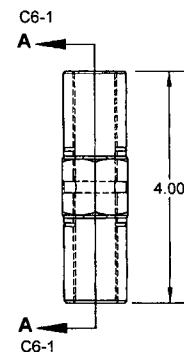
NOTE: Date & initial all entries



SECTION A-A
D3-1



D3689-1 SLEEVE



SHIP TO
REPAIR
ENGINE
UNCONTROLLED COPY
SUBJECT TO
WARRANTY

NO. 78907 M.C.J
12/01/17

RELEASED
08/12/15 MWP

- NOTES:**
- 1) MATERIAL: 17-4PH STAINLESS STEEL ROUND BAR PER AMS 5643 H-900 CONDITION
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: NONE
 - 7) WEIGHT: 0.67 lb
 - 8) DIMENSION SHOWN IS MINIMUM DEPTH OF FULL THREAD
 - 9) LPI PER ASTM 1417 LEVEL 2

B	CHANGE TO 17-4PH H-900 (ZN A8-1); REFORMATTED TO CURRENT DWG STANDARDS	RF	08.11.24
A	NEW ISSUE	RF	08.05.22
REV.		BY	DATE
DESIGN	RF	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	RF	DRAWING NO.	REV. B
MFG. APPR.	RF	D3689	SHEET 1 OF 1
APPROVED	RF	TITLE	SCALE
DE APPR.	RF	SLEEVE	NTS
DATE	08.11.24	COPYRIGHT © 2008 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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NOTE: Date & initial all entries



LIQUID PENETRANT TEST REPORT

P- 14910

CLIENT	<u>DART AgroSare</u>	DATE	<u>March 15/12</u>	PAGE	<u>1</u>	OF	<u>1</u>
ATTENTION	<u>LINDA LACELLE</u>	ACUREN JOB NO.	<u>188-12-00067</u>	TIME	AM <input checked="" type="checkbox"/>	PM <input type="checkbox"/>	
ADDRESS	<u>1270 ABERDEEN</u> <u>HAWKESBURY, ON.</u>	PO/VO NO.		WORK LOCATION	<u>HAWKESBURY</u>		
PROJECT	<u>F.P.T. ON CROSS TUBES AND MACHINED PARTS</u>	ACCEPTANCE STD.	<u>ASTM 1417/04-08</u>	REV./DATE	<u>2005</u>		
ITEM(S) EXAMINED	<u>(2) CROSSTUBES</u> <u>(4) MACHINED SLEEVES</u>						

JOB DESCRIPTION	PROCEDURE NO. <u>LT-202</u> REV./DATE <u>2008</u>	TECHNIQUE NO. <u>LT-202</u> REV./DATE <u>2008</u>
PART NO.	<u>SEE RESULTS</u>	MATERIAL <u>STAINLESS STEEL</u> THICKNESS <u>VARIABLE</u>
SCOPE	<u>LIQUID PENETRANT INSPECTION</u> <u>was carried out on 100% EXTERNAL SURFACE.</u>	

TEST DETAILS	
METHOD <input checked="" type="checkbox"/> FLUORESCENT <input type="checkbox"/> VISIBLE	<input checked="" type="checkbox"/> WATER WASH <input type="checkbox"/> SOLVENT REMOVABLE <input type="checkbox"/> POST EMULSIFIED
FAMILY BRAND <u>UNIDIFLUX</u>	BLACK LIGHT S/N <u>16459</u> <input type="checkbox"/> OUTPUT > 1000 μ W/CM ² <input type="checkbox"/> AMBIENT < 2 fc
PENETRANT <u>2407</u> MINIMUM DWELL TIME <u>45</u> MIN.	LIGHTING EQUIP. <input type="checkbox"/> FLASHLIGHT <input type="checkbox"/> TROUBLELIGHT <input type="checkbox"/> OUTPUT > 100 fc @ SURFACE
PENETRANT REMOVER <u>H2O</u> MINIMUM DRY TIME <u>>10</u> MIN.	OTHER <u>2</u>
DEVELOPER <u>S1052</u> MINIMUM DWELL TIME <u>10</u> MIN.	LIGHT METER S/N <u>1058266</u> CAL DUE DATE <u>2014-08</u>
DEVELOPER TYPE <input checked="" type="checkbox"/> NON AQUEOUS <input type="checkbox"/> AQUEOUS <input type="checkbox"/> DRY	<u>2012</u>

TEST SURFACE	
SURFACE CONDITION <input type="checkbox"/> AS GROUND <input type="checkbox"/> AS WELDED <input checked="" type="checkbox"/> MACHINED <input type="checkbox"/> SHOT BLASTED <input type="checkbox"/> CLEAN BARE METAL	
SURFACE TEMPERATURE <input type="checkbox"/> < -4°C/ 20°F <input type="checkbox"/> -4°C/ 20°F TO 10°C/ 50°F <input checked="" type="checkbox"/> 10°C/ 50°F TO 52°C/ 125°F <input type="checkbox"/> > 52°C/ 125°F	

RESULTS- <input type="checkbox"/> METRIC <input checked="" type="checkbox"/> IMPERIAL	
<u>W.O.F</u>	
<u>1</u> <u>73727</u> - <u>CROSSTUBE</u> <input checked="" type="checkbox"/>	<u>- HAD BEEN REWORKED PREC</u>
<u>1</u> <u>78577</u> - <u>CROSSTUBE</u> <input checked="" type="checkbox"/>	
<u>1</u> <u>78578</u> - <u>CROSSTUBE</u> <input checked="" type="checkbox"/>	
<u>1</u> <u>79633</u> - <u>CROSSTUBE</u> <input checked="" type="checkbox"/>	
<u>1</u> <u>79632</u> - <u>CROSSTUBE</u> <input checked="" type="checkbox"/>	
<u>1</u> <u>76247</u> - <u>CROSS TUBE</u> <input checked="" type="checkbox"/>	
<u>1</u> <u>76246</u> - <u>CROSS TUBE</u> <input checked="" type="checkbox"/>	
<u>4</u> <u>78907</u> - <u>SLEEVE'S</u> <input checked="" type="checkbox"/>	<u>S 2/13/16</u>

Scope of Services
The agreement of Acuren Group Inc. to perform services extends only to those services provided for in writing. Under no circumstances shall such services extend beyond the performance of the requested services. It is expressly understood that all descriptions, comments and expressions of opinion reflect the opinions or observations of Acuren Group Inc. based on information and assumptions supplied by the owner/operator and are not intended nor can they be construed as representations or warranties. Acuren Group Inc. is not assuming any responsibilities of the owner/operator and the owner/operator retains complete responsibility for the engineering, manufacture, repair and use decisions as a result of the data or other information provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of the services referred to herein exceed the amount paid for such services.
Standard of Care
In performing the services provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under similar circumstances by others performing such services in the same or similar locality. No other warranty, expressed or implied, is made or intended by Acuren Group Inc.

SIGNATURES	
CLIENT REPRESENTATIVE <u>Andrew Sheldon</u>	DTR # <u>E-38717</u>
TECHNICIAN (SIGNATURE): <u>[Signature]</u>	REPORT REVIEWED BY:
NAME (PRINT): <u>Mike Houston</u>	NAME INITIALS
1 ST TECHNICIAN CGSB LEVEL <u>II</u> SNT LEVEL <u>2</u> CGSB REG. NO. <u>6606</u>	2 ND TECHNICIAN CGSB LEVEL SNT LEVEL CGSB REG. NO.

WHITE - CLIENT COPY

CANARY - OFFICE COPY

PINK - TECHNICIAN COPY

GOLD - OFFICE COPY